

Discussion of Proposed Approval Order (PSD Permit) For IPP Dense Pack Project

The EPA has determined that projects such as the IPP Dense Pack Uprate is not routine, and is considered a modification to the facility. Environmental rules require that modifications can proceed as “minor” if the increase in emissions is not significant. If emission increases are significant, then the modification must undergo a new source review (NSR). An NSR scrutinizes the emission impact to ambient air, and if severe enough, new control technologies and limits are imposed. For most facilities, the pre-modification actual emissions are compared against the facility’s potential-to-emit emissions after the modification. For operations as large as IPP, almost any modification would be major in this type of comparison.

However, under the Wisconsin Electric Company court case, or WEPCO ruling, power plants can estimate what the actual future emissions will be after modification, and use that to compare against the pre-modification actual emissions. This allows much more flexibility in both operating the plant as well as options for maintaining emissions at low levels.

This proposed Approval Order (AO or PSD Permit) utilizes the WEPCO approach to fast track approval of the project. If the AO is accepted in the current form, nitrogen oxides and sulfur dioxide emissions cannot increase more than 40 tons per year due to the modification. For particulate matter (10 micron) and carbon monoxide, the amounts are 15 tons and 100 tons, respectively. To stay under the 40 tons, wall rings are installed in the scrubber to help in SO₂ control. Other pollutants will not likely increase in major amounts. However, NO_x must be controlled to pre-modification levels through changes in the combustion process, such as biased firing, out-of-service burners, etc.

The AO as written provides an out for the need of adding best available control technology (BACT) for NO_x. A BACT analysis for this project indicated that over-fire air and/or selective non-catalytic reduction technology needed to be installed. To ensure no significant increases can occur, the AO changes the permit limits IPP operates under so that no increase in the facility potential-to-emit occurs due to the modification, as required by State of Utah rules.

Accepting the new limits provides relief in the “prove-up” period following the modification. The WEPCO rule requires a facility to show for five years following the change that no significant increases occurred due to the modification. For a large facility, such as IPP, a 40 ton increase in NO_x can occur in a day, let alone a year. Limiting our PTE to present rates will allow IPP to continue to operate within historical fluctuations of emission rates without undue scrutiny. If emission rates vary more than historical, IPP must show that these increases are not due to the modification. Note that the new permit limits do not kick in until such time as IPP utilizes the increased capacity of the modifications.

This AO must be looked at very closely in this light to determine if IPP can indeed operate under the terms there-in. The volatility of NO_x emissions alone may make it difficult to keep within the historical emission rate changes before the dense pack. If IPP cannot control to those previous emissions, either utilization must be scaled back, or BACT must be revisited.

If you have any questions, please contact IPSC Environmental.